US-PAT-NO: 5844462

DOCUMENT-IDENTIFIER: US 5844462 A

TITLE: Magnetic core-coil assembly for spark ignition systems

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Brief Summary Text - BSTX (3):
This invention relates to spark ignition systems for internal combustion engines; and more particularly to a spark ignition system which improves performance of the engine system and reduces the size of the magnetic components in the spark ignition transformer in a commercially producible manner.

Brief Summary Text - BSTX (5):
In a spark-ignition internal combustion engine, a flyback transformer is commonly used to generate the high voltage needed to create an arc across the gap of the spark plug igniting the fuel and air mixture. The timing of this ignition spark event is critical for best fuel economy and low exhaust emission of environmentally hazardous gases. A spark event which is too late leads to loss of engine power and loss of efficiency. A spark event which is too early leads to detonation, often called "ping" or "knock", which can, in turn, lead to detrimental pre-ignition and subsequent engine damage. Correct spark timing is dependent on engine speed and load. Each cylinder of an engine often requires different timing for optimum performance. Different spark timing for each cylinder can be obtained by providing a spark ignition

US-PAT-NO: 6486763

DOCUMENT-IDENTIFIER: US 6486763 B1

TITLE: Inductive component and method for making same

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Brief Summary Text - BSTX (6):

Moreover, the magnetic materials used for the toroidal core are generally iron powder based, for example, iron-silicon, when the planned operating frequencies are low, up to 100 kHz, or when the frequencies are higher, up to 200 kHz, made of a ferronickel alloy such as permalloy, for instance the material currently known under the name of Moly-Permalloy or MPP, which is a sintered iron and nickel powder with 80 or 50% nickel.

Brief Summary Text - BSTX (16):

This design of the ferrite cores also enables an air gap to be easily made in the magnetic circuit between the two elements comprising the core, at the level of the outer faces of at least one of the arms of the E. This air gap can be adapted for instance by playing on the respective lengths of the arms of the E. This air gap enables the core to support a high DC field and, correlatively, for a given field, a reduction in the volume of the core.

US-PAT-NO: 5892668

DOCUMENT-IDENTIFIER: US 5892668 A

TITLE: Noise-cut filter for power converter

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Claims Text - CLTX (18):
17. A noise-cut filter device as defined in claim 11, wherein said noise-cut filter has a through hole formed in a middle portion thereof, said noise-cut filter device further comprising an insulating, magnetic-powder-dispersed resin in which ferromagnetic powder is dispersed, for sealing an outer periphery of said noise-cut filter and said through hole of said noise-cut filter, sad ferromagnetic powder cooperating with said first and second planar conductors to provide a magnetic circuit.

Claims Text - CLTX (41):
37. A noise-cut filter device as defined in claim 30, wherein said noise-cut filter has a through hole formed in a middle portion thereof, said noise-cut filter device further comprising an insulating, magnetic-powder-dispersed resin in which ferromagnetic powder is dispersed, for sealing an outer periphery of said noise-cut filter and said through hole of said noise-cut filter, said ferromagnetic powder cooperating with said first and second planar conductors to provide a magnetic circuit.